

CLAIMS

1. A magnetic circuit which is constituted of yoke members having no corrosion-resistant metallic surface films prepared from a plate material of 0.1 to 5 mm thickness and having a saturation magnetic flux density of 1.3 to 2.3 Tesla, a maximum relative magnetic permeability of 200 to 22000 and a coercive force of 20 to 2000 A/m as formed from a plate material of a martensite-type stainless steel, ferrite-type stainless steel, precipitation-hardening stainless steel or Cr-type heat-resistant steel containing 0.0001 to 2% by mass of C, 0.0001 to 5% by mass of Si, 0.001 to 2% by mass of Mn, 0.0001 to 0.1% by mass of P, 0.0001 to 0.2% by mass of S, 0.0001 to 5% by mass of Al, 0.001 to 0.1% by mass of O, 0.0001 to 0.1% by mass of N, 0.0001 to 1% by mass of Ni and 10.5 to 30% by mass of Cr, with further addition of at least one alloying element selected from the group consisting of Ti, Co, Cu, Zr, Nb, V, Mo, W, Ta and B, the total amount of said alloying elements being 0.0001 to 5% by mass and the balance excepting the additive and alloying elements and unavoidable impurity elements being Fe, and an Nd/Fe/B-based magnet or magnets after a surface treatment, one, two or four of the said Nd/Fe/B-based magnets being magnetized in monopolar, dipolar or quadripolar and adhesively bonded to the yoke members to make an adhesion-bonded body of the magnet and yoke members, the adhesion-bonded body or a pair of adhesion-bonded bodies of the magnet and yoke members with the same number of the magnets being oppositely positioned, and the magnetic flux flowing concentratedly within the opposite gap formed between the magnet-yoke member or within the opposite gap formed between the pair of

the adhesion-bonded bodies of the magnet and yoke member and inside of the yoke members, the ratios of the leak magnetic flux to the magnetic flux within the opposite gaps not exceeding 50000 ppm and the magnetic field strengths within the opposite gaps and in the inside of the yoke members being free from variations.

2. A voice coil motor or an actuator in which the magnetic circuit described in Claim 1 is used.